

**ABSTRACT OF THE DISCLOSURE**

Systems and methods are disclosed to calculate the hue angle of image data. One system includes at least one input channel, an octant determining unit, an angle determining unit, and an angle offset unit. Each input channel receives chroma components of image data. The octant determining unit determines which octant a given image data occupies. The angle determining unit determines a hue angle of the given image data within an octant. The angle offset unit adjusts the hue angle for the image data according to the octant the image data was determined to occupy.